

## TDSi Guide – eXguard™ Software and Network Load

The load exerted by TDSi's eXguard system on the network is generally quite low. The measurements quoted are based on analysis of TDSi's test rig, which simulates a multi door, multi site network.

The test network has a 10 Megabit bandwidth and at no stage did the load exceed 10% and even then it only bordered this figure for brief periods.

Typically each client PC exchanges 5 packets per Second with the Server PC, these are small packets of less than 128 bytes, and this background hum is barely detectable. Should a complex operation, such as searching the keyholder list take place, then the load is measurable for 20 seconds at 10%. This is for a list of 2000 keyholders.

Likewise when Keys are downloaded to the ACUs there is a spike of 10% over a 10 second period between the client and the Server PC for database traffic.

There is no measurable difference in network traffic when resetting or downloading keys to the ACUs. For example, an IP node with an eX Series Master and 3 S Series Units holds steady at 0.2% or 20 kilobits per second.

You could multiply this up and expect 10 such nodes to generate a maximum 2% load but this would be unlikely due to the scheduling algorithms within the communications software.

If a client organisation had 5 administrators/operators all searching the Keyholder list and resetting ACUs whilst downloading keys then you could thrash the system and generate a 50% load which people would notice, but, most customers these days would have a 100 Megabit bandwidth which means that this 50% becomes 5%. So even a heavily used 2000 key system would not impose an undue load.

As a rough rule of thumb we calculate 5 small packets per second for each PC or ACU in the system. Thus a 3 PC, 30 ACU system would generate 165 packets per second or roughly 80 kilobits per second for less than 1% on a 10MB bus or for less than 1/10<sup>th</sup> of a percent on a 100MB bus.